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MERCHANT & GOULD PC			NGUYEN, SON T	
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/549,941	<b>Applicant(s)</b> JOHNSEN, TORFINN
	<b>Examiner</b> Son T. Nguyen	<b>Art Unit</b> 3643

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
  - If no period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
  - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 07 September 2010.
- 2a) This action is FINAL.      2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1,3-12,14,15,18,20,22,24,26,28,30,32 and 58-70 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 1,3-12,14,15,18,20,22,24,26,28,30,32 and 58-70 is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All    b) Some \* c) None of:  
 1. Certified copies of the priority documents have been received.  
 2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO/SB/08)  
 Paper No(s)/Mail Date 9/7/2010
- 4) Interview Summary (PTO-413)  
 Paper No(s)/Mail Date \_\_\_\_\_
- 5) Notice of Informal Patent Application
- 6) Other: \_\_\_\_\_

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. **Claims 1,3,5,7,8,14,15,18,20,22,24,26,28,30,32,58,60-70 are rejected under 35 U.S.C. 103(a) as being unpatentable over Morgan (6029395 on form PTO-1449) in view of Mankiewicz (6946496).**

For claims 1,3,58, Morgan teaches a film or membrane forming mixture (the mixture is a slurry sprayed over soil to form a film or membrane, col. 1,lines 60-61,col. 5,lines 65-67,col. 6,lines 1-30,col. 7,lines 16-24) for treating at least one of a soil surface and/or a soil mass, the mixture comprising the mixture including a basic powder mixture of a water-soluble, dried and ground organic raw material (col. 2,lines 52-65,col. 3,lines 1-20); a thickening agent (col. 3,lines 40-67); and a pigment (col. 5,lines 1-10); at least one component which has a sufficient antioxidising effect to ensure that the film or membrane has an antioxidising effect on the surroundings (col. 5,lines 1-19); and wherein the powder mixture is saturated with electrons to at least electrical neutrality; and wherein the film or membrane is formed by spreading the mixture over the soil surface or by arranging the mixture in the soil mass (col. 1, lines 50-62,col. 6, lines 1-30).

However, Morgan is silent about wherein the powder mixture is saturated with electrons to at least electrical neutrality.

Mankiewicz teaches in the same field of endeavor of soil mixture as Morgan in which Mankiewicz employs electrons in his mixture for affecting the solubilities and availabilities of minerals at varying oxidation and reduction states, and for facilitating anaerobic processes modifying mineral availability as well as pollutant removal capacity, wherein the powder mixture is oversaturated with electrons and has an excess of negative electric charges (col. 7,lines 40-60). It would have been obvious to one having ordinary skill in the art at the time the invention was made to saturate or oversaturate the mixture of Morgan with electrons to at least electrical neutrality or in excess of negative electric charges as taught by Mankiewicz in order to affect the solubilities and availabilities of minerals at varying oxidation and reduction states, and to facilitate anaerobic processes modifying mineral availability as well as pollutant removal capacity.

For claim 5, Morgan as modified by Mankiewicz teaches a wide range of formulations with various ingredients in the mixture can be combined with different concentration (col. 4,lines 1-39 of Morgan). However, Morgan as modified by Mankiewicz does not specifically states wherein the basic mixture comprises from 1 to 50 parts by weight of organic raw material, 0.1 to 60 parts by weight of thickening agent and from 2-50 parts by weight of pigment. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have the basic mixture of Morgan as modified by Mankiewicz comprises from 1 to 50 parts by weight of organic

Art Unit: 3643

raw material, 0.1 to 60 parts by weight of thickening agent and from 2-50 parts by weight of pigment, depending on the type of plant to which the mixture is applied and depending on how potent or not the user wishes the mixture to be.

For claim 7, Morgan as modified by Mankiewicz teaches wherein the organic raw material is any material originating from the natural environment, the animal or plant kingdom, and that, in a dried and ground state, it contains fibres and adhesive compounds so that the material will function as a binder in the resulting film or membrane (col. 2,lines 52-65,col. 3,lines 10-25,40-67 of Morgan).

For claim 8, Morgan as modified by Mankiewicz teaches wherein the raw organic material comprises substantially natural, industrial or household waste, the waste being organic or biological (col. 2,lines 55-65,col. 3,lines 10-25 of Morgan).

For claims 14,61, Morgan as modified by Mankiewicz teaches wherein the pigment is a dry powder having light characteristics for forming a film or membrane having a high degree of reflection, the pigment comprising one or more substances selected from the group consisting of stone, lime, sand, clay, chalk, shells, white mineral pigments, titanium oxide, white plant dyes and white plant fibres (col. 3,lines 10-20,col. 5,lines 5-9 of Morgan). However, Morgan as modified by Mankiewicz is silent about the pigments being added in an amount of from 0.1 to 25 parts by weight, or from .1 to 10 parts by weight. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have the pigments of Morgan as modified by Mankiewicz being added in an amount of from 0.1 to 25 parts by weight, or from .1 to 10

Art Unit: 3643

parts by weight, depending on the type of plant to which the mixture is applied and depending on how potent or not the user wishes the mixture to be.

For claims 15,62, Morgan as modified by Mankiewicz teaches wherein the pigment is a dry powder having dark characteristics for forming a film or membrane having a low degree of reflection, the pigment comprising one or more substances selected from the group consisting of ash, coal, soot, carbon black, graphite, elementary carbon, ochre, bone, animal shells, marine shells, fish-scales, mineral pigments, plant dyes, plant pigments, and algae-based components (col. 3,lines 1-7,col. 5,lines 1-19 of Morgan). However, Morgan as modified by Mankiewicz is silent about the pigments are added in an amount of from 0.1 to 25 parts by weight, or from 0.1 to 10 parts by weight. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have the pigments of Morgan as modified by Mankiewicz be added in an amount of from 0.1 to 25 parts by weight, or from 0.1 to 10 parts by weight, depending on the type of plant to which the mixture is applied and depending on how potent or not the user wishes the mixture to be.

For claim 18, Morgan as modified by Mankiewicz teaches wherein the basic powder mixture further comprises one or more substances selected from the group consisting of binders (col. 3,lines 40-67 of Morgan), preservatives, fertilizers (col. 3,lines 29-39 of Morgan), water stabilizers, mineral salts, pH regulators (col. 3,lines 35-39 of Morgan), antioxidants (col. 5,lines 9-11 of Morgan) and electrically conductive substances.

For claims 20,63, Morgan as modified by Mankiewicz teaches wherein the binders comprise organic glue and adhesive agents having a high protein content, the organic glue and adhesive agents being one or more substances selected from the group consisting of albumin glue, casein glue, animal glue, agar, alginic acid, ground acorn barnacles, latex and sap (col. 3,lines 40-67 of Morgan). However, Morgan as modified by Mankiewicz is silent about the binders are added in an amount of from 0.1 to 15 parts by weight, or 0.1 to 5 parts by weight. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have the binders of Morgan as modified by Mankiewicz be added in an amount of from 0.1 to 15 parts by weight, or 0.1 to 5 parts by weight, depending on the type of plant to which the mixture is applied and depending on how potent or not the user wishes the mixture to be.

For claim 22, Morgan as modified by Mankiewicz teaches wherein the binders further comprise one or more fibres selected from the group consisting of cellulose fibre, plant fibre, textile fibre, animal fibre and reinforcing fibre (col. 2,lines 52-65,col. 3,lines 40-67 of Morgan). However, Morgan as modified by Mankiewicz is silent about the fibre materials are added in an amount of from 0.5 to 30 parts by weight. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have the fibre materials of Morgan as modified by Mankiewicz be added in an amount of from 0.5 to 30 parts by weight, depending on the type of plant to which the mixture is applied and depending on how potent or not the user wishes the mixture to be.

For claims 24,64,65, Morgan as modified by Mankiewicz teaches wherein the fertilizer agents comprise one or more fertilizers selected from the group consisting of

Art Unit: 3643

animal manure, fish guano, guano, urea, inorganic nutrient salts and micronutrients (col. 3,lines 29-39 of Morgan). However, Morgan as modified by Mankiewicz is silent about the fertilizer materials are added in an amount of from 0.1 to 20, or 0.1 to 15, or 0.1 to 5 parts by weight of dry powder. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have the fertilizer materials of Morgan as modified by Mankiewicz be added in an amount of from 0.1 to 20, or 0.1. to 15, or 0.1 to 5 parts by weight of dry powder, depending on the type of plant to which the mixture is applied and depending on how potent or not the user wishes the mixture to be.

For claims 26,66, Morgan as modified by Mankiewicz teaches wherein the electrically conductive additives comprise one or more substances selected from the group consisting of readily soluble mineral salts, ash, and carbon fibres (col. 4,lines 5-10,col. 6,lines 1-10 of Mankiewicz). However, Morgan as modified by Mankiewicz is silent about the electrically conductive substances are being added in an amount of from 0.1 to 15 or 0.1 to 5 parts by weight of dry powder. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have the electrically conductive substances of Morgan as modified by Mankiewicz be added in an amount of from 0.1 to 15, or 0.1 to 5 parts by weight of dry powder, depending on the type of plant to which the mixture is applied and depending on how potent or not the user wishes the mixture to be.

For claims 28,67,68, Morgan as modified by Mankiewicz teaches wherein the water stabilizers comprise one or more substances selected from the group consisting of plant oils, mucilage, organic waxes and organic oils (col. 3,lines 51-52,col. 4,line 58

Art Unit: 3643

of Morgan). However, Morgan as modified by Mankiewicz is silent about the water stabilizers are added in an amount of from 0.1 to 8.0, or from 0.1 to 25, or from 0.1 to 5 parts by weight of dry powder. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have the water stabilizers of Morgan as modified by Mankiewicz be added in an amount of from 0.1 to 8.0, or from 0.1 to 25, or from 0.1 to 5 parts by weight of dry powder, depending on the type of plant to which the mixture is applied and depending on how potent or not the user wishes the mixture to be.

For claims 30 & 69, Morgan as modified by Mankiewicz teaches wherein the pH regulators comprise one or more substances selected from the group consisting of sap, basic minerals, ash, and salts of the alkaline and alkaline earth metals (col. 3,lines 30-39 of Morgan). However, Morgan as modified by Mankiewicz is silent about the pH regulator is added in an amount of from 0.1 to 50, or from 0.1 to 10. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have the pH regulator of Morgan as modified by Mankiewicz be added in an amount of from 0.1 to 50, or from 0.1 to 10, depending on the type of plant to which the mixture is applied and depending on how potent or not the user wishes the mixture to be.

For claims 32 & 70, Morgan as modified by Mankiewicz is silent about wherein the pH regulators are added in such quantity that the resulting membrane or film has a pH that is greater than 5, or in the range of pH 5 to 10. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have the pH regulators of Morgan as modified by Mankiewicz be added in such quantity that the

resulting membrane or film has a pH that is greater than 5, or in the range of pH 5 to 10, depending on the type of plant to which the mixture is applied and depending on how potent or not the user wishes the mixture to be.

For claim 60, Morgan as modified by Mankiewicz teaches wherein the white plant fibers are one or more substances selected from the group consisting of cotton, bog cotton or algae based components (col. 3,lines 1-7,col. 5,lines 1-19 of Morgan).

**3. Claims 4,6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Morgan as modified by Mankiewicz as applied to claim 1 above, and further in view of Wake et al. (JP402195830).**

Morgan as modified by Mankiewicz is silent about wherein the basic powder mixture includes a growth medium for microalgae, and wherein the basic mixture contains from 0.t to 10 parts by weight of microalgae.

Wake et al. teach in the same field of endeavor of soil mixture as Morgan in which Wake et al. employs microalgae in their mixture to promote germination (see Abstract). It would have been obvious to one having ordinary skill in the art at the time the invention was made to employ microalgae as taught by Wake et al. in the mixture of Morgan as modified by Mankiewicz in order to promote germination.

Morgan as modified by Mankiewicz and Wake et al. is silent about wherein the basic mixture contains from 0.t to 10 parts by weight of microalgae. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have the basic mixture of Morgan as modified by Mankiewicz and Wake et al. containing from 0.t to 10 parts by weight of microalgae, depending on the type of plant

Art Unit: 3643

to which the mixture is applied and depending on how potent or not the user wishes the mixture to be.

**4. Claims 9,10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Morgan as modified by Mankiewicz as applied to claims 1,7,8 above, and further in view of Chiaffredo et al. (5441877).**

For claim 9, Morgan as modified by Mankiewicz is silent about wherein the waste is vegetable debris that is at least one of dried and ground seaweed, sea grass or kelp, and that 3 to 6 parts by weight thereof are used in the basic mixture.

Chiaffredo et al. teach in the same field of endeavor of soil mixture as Morgan in which Chiaffredo et al. employ seaweed in their mixture because seaweed is rich in organic matter for nutrients (col. 5,line 27). It would have been obvious to one having ordinary skill in the art at the time the invention was made to employ seaweed as taught by Chiaffredo et al. in the mixture of Morgan as modified by Mankiewicz because seaweed is rich in nutrients which will enhance plant growth.

Morgan as modified by Mankiewicz and Chiaffredo et al. is silent about 3 to 6 parts by weight of seaweed is used in the basic mixture. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have the seaweed of Morgan as modified by Mankiewicz and Chiaffredo et al. be added 3 to 6 parts by weight of seaweed is used in the basic mixture, depending on the type of plant to which the mixture is applied and depending on how potent or not the user wishes the mixture to be.

For claim 10, Morgan as modified by Mankiewicz and Chiaffredo et al. is silent about employing sea grass comprises at least one of the species Spartina or reeds, instead of seaweed. It would have been obvious to one having ordinary skill in the art at the time the invention was made to employ sea grass instead of the seaweed of Morgan as modified by Mankiewicz and Chiaffredo et al., depending on the type of plant to which the mixture is applied and depending on how potent or not the user wishes the mixture to be.

5. **Claims 11,12 & 59 are rejected under 35 U.S.C. 103(a) as being unpatentable over Morgan as modified by Mankiewicz as applied to claim 1 above, and further in view of Wallace et al. (4797145).**

For claim 11, Morgan as modified by Mankiewicz is silent about wherein the thickening agent is xanthan or xanthan gum, the xanthan or xanthan gum being added in an amount of from 0.1 to 6 parts by weight.

Wallace et al. teach in the same field of endeavor of soil mixture as Morgan in which Wallace et al. employ xanthan gum in their mixture for thickening agent (col. 5,lines 5-15). It would have been obvious to one having ordinary skill in the art at the time the invention was made to employ xanthan gum as taught by Wallace et al. for the thickening agent in the mixture of Morgan as modified by Mankiewicz, depending on the type of plant to which the mixture is applied and depending on how potent or not the user wishes the mixture to be.

For claims 12,59, Morgan as modified by Mankiewicz is silent about wherein the thickening agent comprises one or more alginates, the alginates being admixed and replacing at least part or all of the xanthan or xanthan gum.

In addition to the above, Wallace et al. also teach alginates admixed together or not with xanthan gum (col. 5,lines 5-15). It would have been obvious to one having ordinary skill in the art at the time the invention was made to employ alginates together with or without xanthan gum as taught by Wallace et al. for the thickening agent in the mixture of Morgan as modified by Mankiewicz, depending on the type of plant to which the mixture is applied and depending on how potent or not the user wishes the mixture to be.

***Response to Arguments***

6. Applicant's arguments filed 9/7/2010 have been fully considered but they are not persuasive. The arguments appeared to be the same as argued in the final rejection mailed on 10/7/2009, thus, please see the final rejection for response.

***Conclusion***

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Son T. Nguyen whose telephone number is 571-272-6889. The examiner can normally be reached on Mon-Thu from 10:00am to 5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Peter M. Poon can be reached on 571-272-6891. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 3643

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/Son T. Nguyen/  
Primary Examiner, Art Unit 3643